STATE ROUTE

Transportation Concept Report

Office of System Planning District 6 July 2001

Caltrans

Caltrans District 6
Office of System Planning

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STATE ROUTE

Transportation Concept Report

Office of System Planning District 6 July 2001

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Date

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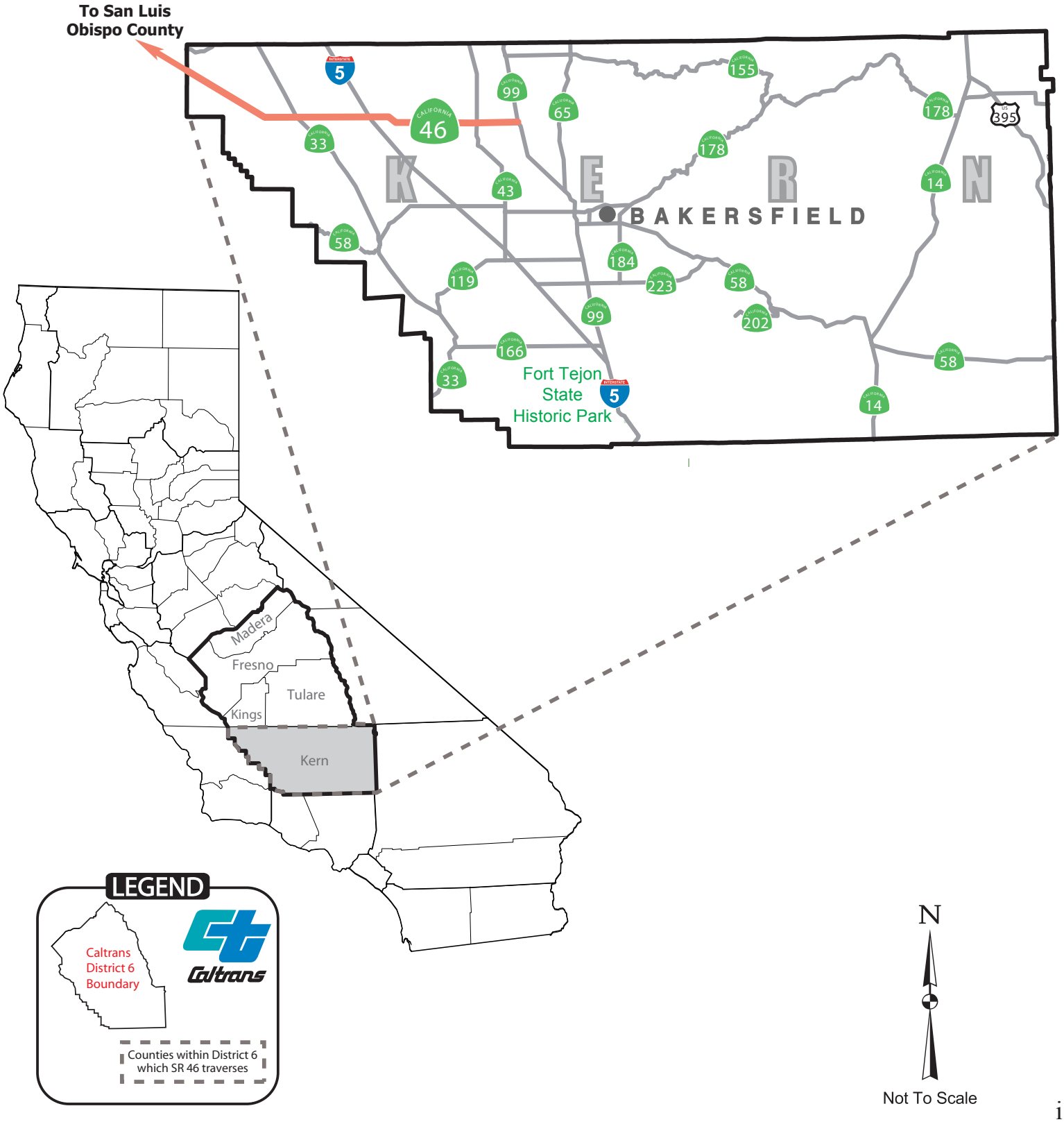
District Director

7/11/01
Date

STATE ROUTE
TRANSPORTATION CONCEPT REPORT

LOCATION MAP



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I. INTRODUCTION

The Transportation Concept Report (TCR) is a long-range (20 year) *system planning document* that describes the current and projected operation of a State highway corridor over a 10 to 20 year period. The TCR also establishes a planning concept for the corridor. Given reasonable financial constraints, along with other constraints such as social or environmental, and projected travel demand over a 20 year period, the TCR defines the appropriate Level of Service (LOS) and facility types for each route. Also, within this document the nature and extent of the improvements needed to attain that LOS are broadly identified. The TCR is the first system planning document to identify and assess both the use of alternative transportation modes and the deployment of Intelligent Transportation Systems (ITS) in conjunction with specific routes. Alternative transportation normally reduces overall vehicle volumes on a given route, whereas ITS enhances safety and operational efficiency.

Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and "D" on State highway facilities, or whatever LOS is feasible. This is the overriding determination whether an improvement, either capacity enhancing or operational, is needed. There is potential that lesser improvements, such as intersection modifications or passing lanes, may suffice until additional lanes are required.

The existing right of way (ROW) is indicated in this report by route segment. This ROW is the *typical* (most prevalent) ROW and may not be consistent or precise throughout the segment. For the Intergovernmental Review (IGR) process or more exact ROW measurement, ROW maps need to be consulted.

Beyond the 20 year planning period, the TCR identifies the Ultimate Transportation Corridor (UTC) to ensure that adequate ROW is preserved for ultimate facility projects. The UTC does not consider funding issues. For short-term purposes (less than 20 years), interim ROW may be identified in the TCR for existing highways prior to proposed realignment for permitting purposes.

This TCR is the initial and conceptual planning phase that leads to subsequent programming and the project development process. Consequently, the specific nature of proposed improvements such as roadway width, number of lanes, access control, etc., might change in later project development stages. Final determinations are normally made during the project report and design phases. Therefore, a TCR is a "living document," subject to amendments as conditions change and projects are completed.

The TCR for State Route 46 was prepared and completed by District 6 Office of System Planning staff in cooperation with local and regional agencies and other Caltrans functional units. As such, it will serve as a guide in cooperative planning and implementation of transportation and land use decisions.

II. ROUTE DESCRIPTION AND PURPOSE

Route 46 begins at the junction of Route 1 in San Luis Obispo County and continues east for 118 miles through the Counties of San Luis Obispo and Kern (see Map, Exhibit 1, page "i"). The route terminates at its junction with State Route 99 in Kern County. This TCR covers the 58 mile length of the Route within the Kern County portion of Caltrans District 6 (which encompasses the Counties of Fresno, Kern, Kings, Madera, and Tulare).

Route 46 was adopted into the California Highway System in 1915 and is part of the California Freeway and Expressway System. This highway crosses terrain that transitions from gently rolling rangeland to level agricultural land and small urban areas. On a year-around basis, it functions as a significant interregional route for recreational traffic to and from the Central Coast/Central Valley. Route 46 also serves as a major route for agricultural products with a truck volume of 40 percent.

Route 46 is designated as a High Emphasis Focus Route from Route 101 in San Luis Obispo County to Interstate 5 (I – 5) in Kern County and is also part of the National Highway System (NHS). The western portion of Route 46 consists primarily of rangeland with rolling terrain. A local airfield is located adjacent to the highway just west of I - 5. Heading east, the terrain levels and transitions to oil exploration. The community of Lost Hills is located on Route 46 at post mile (PM) 30.48. Lost Hills has a number of small businesses and a historic school structure fronting the route as well as an electrical substation. Continuing east of Lost Hills, the land use transitions to agriculture and the route crosses several canals. Route 46 passes through the community of Wasco at PM 51.9, with business and residential development fronting the highway. A railroad underpass is located in Wasco, which presently confines the route configuration to 2 lanes at that location. An electrical substation is located on the eastern edge of Wasco, adjacent to Route 46. From Wasco to its termination at the junction with Route 99, Route 46 continues to traverse agricultural land. The alignment on Route 46 includes numerous natural and agricultural areas that have endangered species. Oil exploration fields may present hazardous waste concerns.

Within Kern County, the Route is predominately 2 lane Conventional. The length is planned for 4 lane Expressway with a 215 foot ROW. In Wasco a 4 lane Conventional highway may be necessary due to ROW constraints. The most immediate obstacles to widening are: a 2 lane railroad underpass in Wasco, ROW issues pertaining to archaeology, presence of endangered species, agriculture, and oil exploration. Alternatives to the 2 lane railroad underpass are the construction of a new underpass or overpass. The entire length of Route 46 is planned to be completed by the year 2020. Asphaltic/concrete (A/C) overlay, with chip seal and shoulder widening is planned for selected portions. *If not identified by a Project Study Report (PSR) or programmed project, 110 feet is the interim ROW standard.*

Existing transit services consist of Greyhound and Orange Belt bus lines for the interregional traveler and Kern County provides bus trips to and from Wasco.

III. CONCEPT RATIONALE

Except in Wasco, the Concept LOS is “C” for five of the six segments of Route 46 within District 6. The general character of the highway remains reasonably constant in terms of configuration, traffic volumes, and vehicle mix.

LOS “C” has been assigned as Concept LOS to most of this Route because the future planned facility will have 4 lanes, either Expressway or Conventional, and it represents an acceptable and cost-effective LOS for the interregional traveler. LOS “D” was assigned in Wasco due to the urbanized nature of the highway in that vicinity. LOS “C” is consistent with the Concept LOS for Route 46 in San Luis Obispo County (Caltrans District 5). This will double the present capacity while the projected volumes will remain consistent with present growth rates. In addition, safety and operational performance can be expected to remain or possibly improve in the future due to the 4 lane configuration.

IV. STATE HIGHWAY OPERATIONS CONDITIONS: PRESENT AND FUTURE

On the next page is a table showing the 20 Year Route Development Plan (RDP) for Route 46. This plan divides Route 46 into six distinct segments based on various parameters such as traffic volumes, rural versus urban character, type of terrain, existing and future facility types, etc. Each segment indicates: PM limits, description of location, existing facility and ROW, 20 Year Route Concept Facility, UTC, and the Ultimate ROW needed for preservation and project development purposes. Additionally, the RDP indicates the current and future LOS (2010 and 2020) for the existing facility, along with the LOS for the improved Route Concept facility and shows the Year of Deficiency for segments where the LOS does not meet the Route Concept. This would indicate an additional capacity problem on the highway facility that needs to be addressed.

STATE ROUTE 46
ROUTE DEVELOPMENT PLAN

Segment	Rural or Urban	County	Route	PM Behind / PM Ahead & KP Behind / KP Ahead	POST MILE LIMITS FROM / TO	Existing Facility/ Right-of-Way **	*NO-BUILD*			20 Year Concept FAC/LOS	Deficiency "NO BUILD" (year)	LOS with Improvement	Sug-gested UTC	Ultimate Right-Of-Way
							Current LOS	2010 LOS	2020 LOS					
1	Rural	KERN	46	PM 0.0 / 7.3 KP 0.0 / 11.7	SLO County line / Keck's Rd.	2C/100'	D	E	F	4E/C	2000	B	4E	215'
2	Rural	KERN	46	PM 7.3 / 20.5 KP 11.7 / 33.0	Keck's Rd. / SR 33	2C/100'	C	D	E	4E/C	2010	B	4E	215'
3	Rural	KERN	46	PM 20.5 / 32.5 KP 33.0 / 52.3	SR 33 / I - 5	2C/100'*	B	C	D	4E/C	2010	A	4E	215'***
4	Rural	KERN	46	PM 32.5 / 46.0 KP 52.3 / 74.0	I - 5 / One mile west of Scofield Ave.	2C/60'	C	D	E	4E/C	2010	A	4E	215'
5	Urban	KERN	46	PM 46.0 / 51.2 KP 75.6 / 82.4	One mile west of Scofield Ave. / SR 43 – North Junction	2C/100'	B	D*	E*	4C*/D	2020	B*	4E*	215'
6	Rural	KERN	46	PM 51.2 / 57.8 KP 82.4 / 93.0	SR 43 – North Junction / SR 99	2C/80'	B	C	D	4E/C	2020	A	4E	215'

*INTERIM IMPROVEMENT FOR 20 YEARS WILL BE TO WIDEN TO 80' - 110' THRU WASCO.
**EXISTING ROW MAY VARY IN SPECIFIC LOCATIONS-CHECK APPROPRIATE ROW MAP FOR SPECIFIC LOCATION(S) ***ROW THROUGH LOST HILLS IS 90'

*See Appendix for TCR Glossary

V. ROUTE 46 HIGHWAY OPERATIONS: PRESENT AND FUTURE DEFICIENCIES AND NEEDS

As of the year 2000, Route 46 is operating at LOS "C" or "D" from the San Luis Obispo County Line to Route 33. From Route 33 to the termination point at Route 99, it operates at LOS "B" or "C."

By the years 2010 and 2020, the LOS will deteriorate on all segments due to associated growth impacts. The improvements made to the freeway systems in Bakersfield and Fresno will make trips to the coast an increasingly attractive travel alternative. Caltrans may periodically determine other operational or safety concerns through field investigations and technical reports.

The Concept LOS will be met through improvements on all segments, which will be widened to either 4 lane Expressway or Conventional highways. It is probable that Intelligent Transportation System (ITS) strategies and transportation alternatives will be deployed over the next 20 years as a means to sustain and improve operating conditions. The projected improvements to Route 46 will occur over a 20 year period of time and will be funded by the Kern Regional Improvement Program (RIP), Caltrans' Interregional Improvement Program (IIP) funds and the Governor's Traffic Congestion Relief Program (TCRP) administered by Caltrans (see VI below for Programmed and Planned Improvements to Route 46: 20 Years). They are shown already in part or whole within the Kern Council of Government's regional traffic model.

VI. PROGRAMMED AND PLANNED IMPROVEMENTS TO ROUTE 46

There are planned or programmed highway improvement projects for the entire length of Route 46 over the next 20 years. Listed below is the range of projects which shows: (1) the route segment of the project; (2) a description of the project; (3) the approximate date it will be completed (future unknown); and (4) whether or not it is programmed in the State Transportation Improvement Program (STIP) or the Traffic Congestion Relief Program (TCRP) – SHOWN AS: Programmed: STIP or TCRP) or planned (Regional Transportation Plan or the Interregional Transportation Strategic Plan - SHOWN AS: Planned – RTP or ITSP). These are capacity increasing projects only and not State Highway Operations Protection Program (SHOPP), which indicates safety and operational projects. SHOPP projects will be indicated on each Segment Fact Sheet.

SEGMENT	IMPROVEMENT	COMPLETION TARGET DATE	PROGRAMMED/ PLANNED
1 PM (0.0 - 7.3)	2 lane Conventional highway (2C) to 4 lane Expressway (4E)	2008	Programmed – 1998 STIP/TCRP
2 PM (7.3 - 20.5)	2 lane Conventional highway (2C) to 4 lane Expressway (4E)	2011	Programmed – 2000 STIP/TCRP
3 PM (20.5 - 32.5)	2 lane Conventional highway (2C) to 4 lane Expressway (4E)	2011	Programmed – 2000 STIP/TCRP
4 PM (32.5 - 46.0)	2 lane Conventional highway (2C) to 4 lane Expressway (4E)	2018	Planned - RTP
5 PM (46.0 - 51.2)	Environmental Study for widening project; 2 lane Conventional highway (2C) to 4 lane Conventional highway	Study-2003 Improvements 2011	Programmed – 1998 STIP
6 PM (51.2 - 57.8)	2 lane Conventional highway (2C) to 4 lane Expressway (4E)	2018	Planned - RTP

VII. ROUTE 46 TRANSPORTATION CONCEPT REPORT (TCR) SEGMENT MAP

Attached is a foldout (11" x 17") TCR Segment Map for Route 46. This map shows the six segments for this State highway in Kern County.

VIII. ROUTE 46 SEGMENT FACT SHEETS

The following pages encompass a double-sided Segment Fact Sheet for each segment of Route 46. The Fact Sheet includes specific details of route segment characteristics and current/future plans.

IX. APPENDIX

Attached is the Appendix that contains:

1) Glossary, defining terms used throughout this document.

2) Kern 46 Database which includes:

- Description
- Geometrics
- Traffic
- Classification and System Designation

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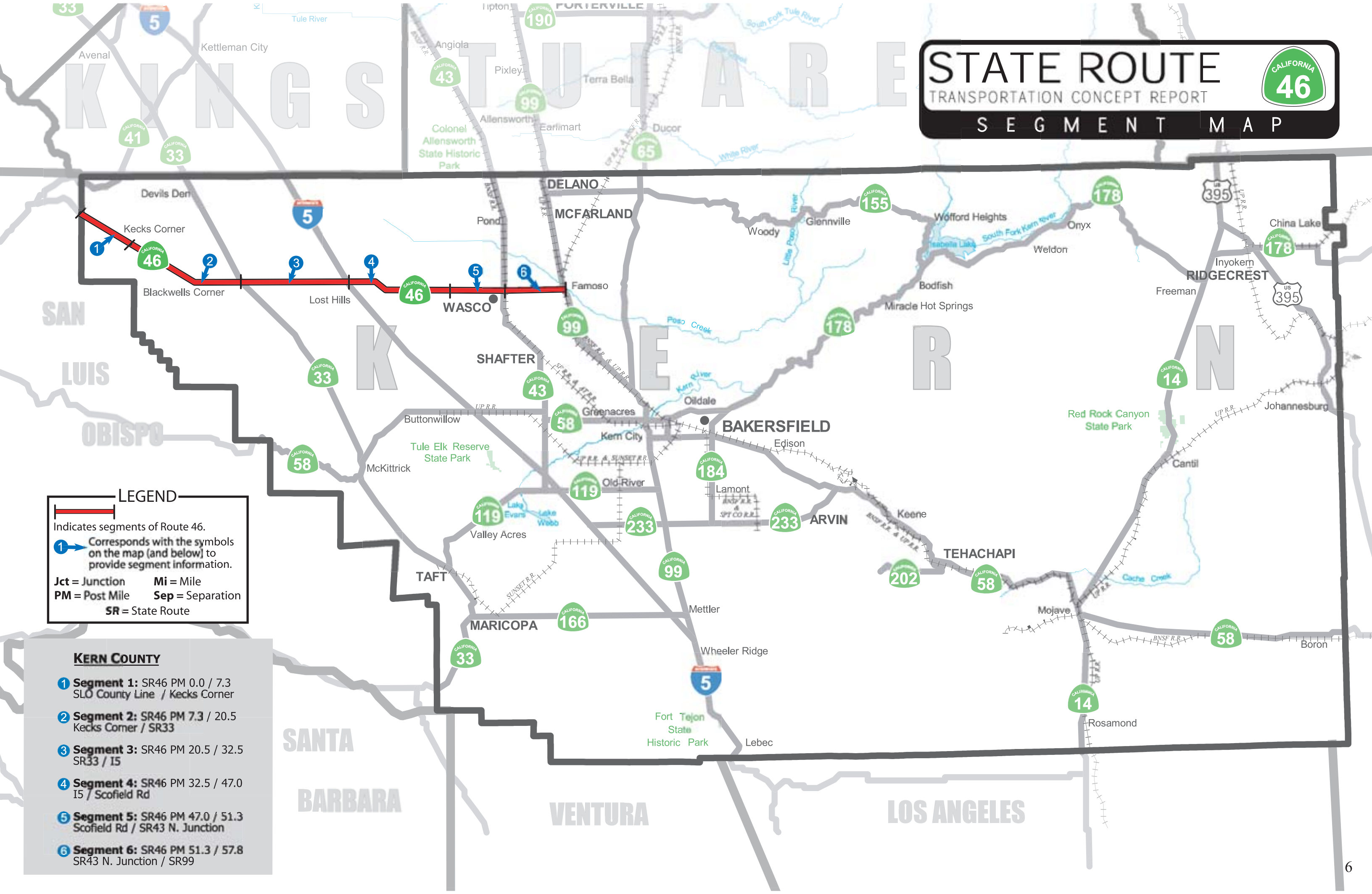
*See Appendix for definitions of terms



KERN COUNTY

1 **Segment 1:** SR46 PM 0.0 / 7.3
SLO County Line / Kecks Corner

2 **Segment 2:** SR46 PM 7.3 / 20.5
Kecks Corner / SR33

3 **Segment 3:** SR46 PM 20.5 / 32.5
SR33 / I5

4 **Segment 4:** SR46 PM 32.5 / 47.0
I5 / Scofield Rd

5 **Segment 5:** SR46 PM 47.0 / 51.3
Scofield Rd / SR43 N. Junction

6 **Segment 6:** SR46 PM 51.3 / 57.8
SR43 N. Junction / SR99

State Route 46
Segment Fact Sheet

Length (MI):	7.3	Length (KM):	11.7	Segment:	1 of 6	KERN County	Rural or Urban: RURAL
Begin PM:	0.0	Begin KP:	0.0	SLO Co. line to Keck's Rd.			
End PM:	7.3	End KP:	11.7				

Functional Classification: Principal Arterial

Route Designations:

Nat'l Hwy System (NHS)	YES	IRRS	HE,F	NO = Non IRRS; F = Yes, Focus; G = Yes, Gateway; HE = Yes, High Emphasis; HE,F = Yes, High Emphasis and Focus
Freeway Expressway Designation	YES	Nat'l Truck Network (NTN)	TA	NO = Non NTN; STAA = Yes, NTN STAA TRUCKS; TA = Yes, Terminal Access
Regionally Significant	YES			
Lifeline	NO	Scenic	NO	NO = Non Scenic; OD = Yes, Officially Designated; E = Yes, Eligible
STRAHNET	YES			

Transportation Concept

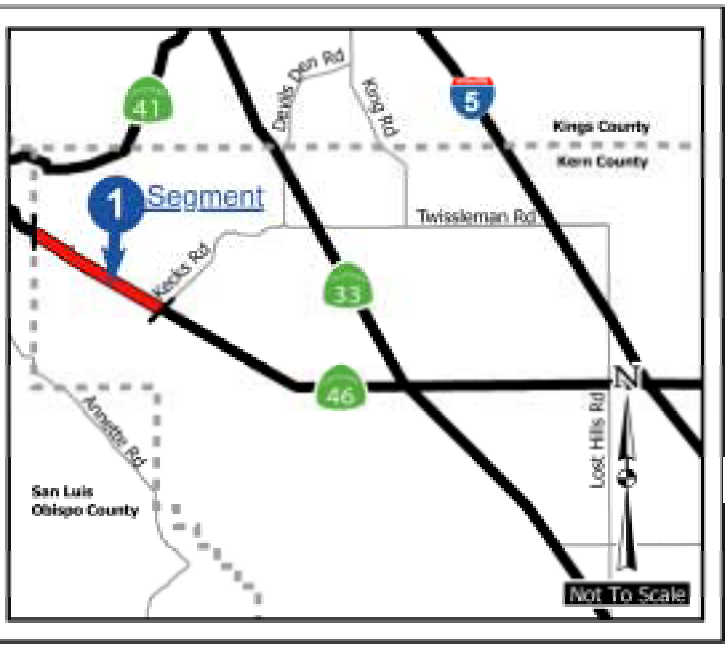
General Comments:

Existing Facility	2C	Existing LOS	D
Concept Facility	4E	Concept LOS	C
Ultimate Facility	4E	Existing/Ultimate Right - of - Way (ROW) in feet	100/215

Description - Rationale - General Comments

Segment 1 covers rolling terrain that transitions to flat. It is presently 2 lane Conventional, with proposed improvement to 4 lane Expressway (215' ROW with 60' median; varied alignments). An airstrip parallels closely to the existing shoulder just west of Interstate 5, which may raise future ROW concerns. Additionally, the entire segment crosses ranch land, which also may raise ROW issues.

This segment is expected to operate at LOS B as a 20 year improved facility, with LOS C as the Concept LOS.



Programmed or Planned Projects

Programmed:

1998 STIP: SLO County Line - Keck's Rd. (KER 46 - PM 0.0-7.3) 2 lane Conventional highway to 4 lane Expressway (also TCRP) (2008).

2000 SHOPP: Part of asphaltic/concrete (A/C) overlay and widening (PM 0.0/20.5).

Planned:

There are no projects planned for this segment.

Route Concept Deficiencies/Improvements

Widening to a 4 lane Expressway will enhance the capacity of this segment. Operational/safety efficiency will be enhanced by deployment of Intelligent Transportation Systems (ITS) technology which may include, but not be limited to; weather and pavement condition sensors, changeable message signs, improved lane markers, and smart call boxes.

Year Deficient: 2000

LOS with Improvement: B

State Route 46
Segment Fact Sheet

Land Use

The area through which this segment passes is primarily rural, with ranching and agriculture as the major activities. Significant future land use changes are not expected in the near future. A small airport landing strip closely parallels SR 46's north shoulder midway through this segment. This may likely present specific ROW issues when widening projects are initiated.

Air Quality

For specific environmental information, contact the Caltrans District 6 Environmental office in Fresno at (559) 243-8234.

Air Quality District

San Joaquin Valley Unified Air Pollution Control District
1190 E. Gettysburg Ave., Fresno 93726 (559) 230-6000

Air Basin	Comments
San Joaquin Valley	Non-attainment area

Local Jurisdictions

RTPA/MPO

Kern County COG, 1401 19th St. Suite 200
Bakersfield, CA 93301 (661) 861-2191

Local and/or Regional LOS Standards:	General Plan and/or RTP Classification Standards:
Kern County, LOS D	Freeway

Transit Services/Modal Options

Intercity transit consists of Greyhound Bus Lines/Orange Belt Stage Lines route connection between the coast and Bakersfield/Wasco.

Highway Log Right-of-Way Information

Average Median Width:	**0.0**	**Feet**	**0.00**	**Meters**
Average Shoulder Widths:	**8.0**	**Feet**	**2.44**	**Meters**
Average Lane Widths:	**12.0**	**Feet**	**3.66**	**Meters**

Right-of-Way (ROW) Comments (General):

There are no passing lanes in this segment.

Traffic Forecasts

Year	AADT	Peak Hourly Volumes	LOS	V/C Ratio	Density
2000	5,800	812	D	0.48	N/A
2010	8,764	1,227	E	0.72	N/A
2020	12,366	1,731	F	1.00	N/A

Calculation Factors

% Traffic growth per year (0-20 yrs):	**3.5**	**% Trucks:**	**40.0**
Directional Split:	**67/33**	**% Buses + RVs:**	**5.0**
Terrain:	**ROLLING**		

TASAS Accident Data -

Rates are per million vehicle miles from 1/1/96 through 12/31/98

Actual % Fatal + Injury Accident Rate	**0.17**	**Actual % Total Accident Rate**	**0.40**
Statewide Average % Fatal + Injury Accident Rate	**0.63**	**Statewide Average % Total Accident Rate**	**1.32**

General Comments:

Traffic Analysis Comments

References used throughout the TCR:

Kern County General Plan, 1998
Kern County Regional Transportation Plan, 1998
Intelligent Transportation System Early Deployment Plan (Kern Region), 1997
State Transportation Improvement Plan (STIP), 1998, 2000
State Highway Operation Protection Plan (SHOPP), 1998, 2000, 2001
State Route 46 Project Study Report (KER 46 PM 0.0-32.8), 1993
Project Scope Summary Report (PSSR) (KER 46 PM 32.5-37.2), 1993
State Route 46 Corridor Study, June 2000

State Route 46
Segment Fact Sheet

Length (MI):	13.2	**Length (KM):**	21.2	**Segment:**	2 of 6	**KERN County**	**Rural or Urban:** RURAL
Begin PM:	7.3	**Begin KP:**	11.7	**Keck's Rd. to SR 33**			
End PM:	20.5	**End KP:**	33.0				

Functional Classification: Principal Arterial

Route Designations:

Nat'l Hwy System (NHS)	YES	IRRS	HE,F	NO = Non IRRS; F = Yes, Focus; G = Yes, Gateway; HE = Yes, High Emphasis; HE,F = Yes, High Emphasis and Focus
Freeway Expressway Designation	YES	Nat'l Truck Network (NTN)	TA	NO = Non NTN; STAA = Yes, NTN STAA TRUCKS; TA = Yes, Terminal Access
Regionally Significant	NO			
Lifeline	NO	Scenic	NO	NO = Non Scenic; OD = Yes, Officially Designated; E = Yes, Eligible
STRAHNET	YES			

Transportation Concept

General Comments:

Existing Facility	2C	Existing LOS	C
Concept Facility	4E	Concept LOS	C
Ultimate Facility	4E	Existing/Ultimate Right - of - Way (ROW) in feet	100/215

Description - Rationale - General Comments

Segment 2 crosses flat terrain. It is presently 2 lane Conventional, with proposed improvement to 4 lane Expressway (215' ROW with 60' median; varied alignments). This segment crosses an area where endangered species issues exist. Leaking underground storage tanks located near SR 33 junction (PM 20.5) present environmental and ROW issues.

This segment is expected to operate at LOS B as a 20 year improved facility, with LOS C as the Concept LOS.

Programmed or Planned Projects

Programmed:

2000 STIP: Keck's Rd. - SR 33 (KER 46-PM 7.3-20.5) 2 lane Conventional highway to 4 lane Expressway (also TCRP) (2011).

2001 SHOPP: Part of asphaltic/concrete (A/C) overlay and widening (PM 0.0/20.5).

Planned:

There are no projects planned for this segment.

Route Concept Deficiencies/Improvements

Widening to 4 lane Expressway will enhance the capacity of this segment. Operational/safety efficiency will be enhanced by deployment of Intelligent Transportation Systems (ITS) technology which may include, but not be limited to; weather and pavement condition sensors, changeable message signs, improved lane markers, and smart call boxes.

Year Deficient: 2010

LOS with Improvement: B

State Route 46
Segment Fact Sheet

Land Use

Segment 4 crosses mainly rangeland with oil exploration near the western-most point of the segment. Significant development in the future is not expected. The area contains a number of endangered species' which may present issues for proposed widening projects. Leaking underground storage tanks near the existing ROW (SR 33 junction) present both ROW and environmental issues.

Air Quality

For specific environmental information, contact the Caltrans District 6 Environmental office in Fresno at (559) 243-8234.

Air Quality District

San Joaquin Valley Unified Air Pollution Control District
1190 E. Gettysburg Ave., Fresno 93726 (559) 230-6000

Air Basin	Comments
San Joaquin Valley	Non-attainment area

Local Jurisdictions

RTPA/MPO

Kern County COG, 1401 19th St. Suite 200
Bakersfield, CA 93301 (661) 861-2191

Local and/or Regional LOS Standards:	General Plan and/or RTP Classification Standards:
Kern County, LOS D	Freeway

Transit Services/Modal Options

Intercity transit consists of Greyhound Bus Lines/Orange Belt Stage Lines route connection between the coast and Bakersfield/Wasco. The connection occurs at the SR 41/46 junction.

Highway Log Right-of-Way Information

Average Median Width:	**0.0**	**Feet**	**0.00**	**Meters**
Average Shoulder Widths:	**8.0**	**Feet**	**2.44**	**Meters**
Average Lane Widths:	**12.0**	**Feet**	**3.66**	**Meters**

Right-of-Way (ROW) Comments (General):

There are no passing lanes in this segment.

Traffic Forecasts

Year	AADT	Peak Hourly Volumes	LOS	V/C Ratio	Density
2000	6,000	840	C	0.38	N/A
2010	8,754	1,226	D	0.55	N/A
2020	12,000	1,680	E	0.75	N/A

Calculation Factors

% Traffic growth per year (0-20 yrs):	**3.2**	**% Trucks:**	**40.0**
Directional Split:	**67/33**	**% Buses + RVs:**	**5.0**
Terrain:	**LEVEL**		

TASAS Accident Data -

Rates are per million vehicle miles from 1/1/96 through 12/31/98

Actual % Fatal + Injury Accident Rate	**0.26**	**Actual % Total Accident Rate**	**0.55**
Statewide Average % Fatal + Injury Accident Rate	**0.63**	**Statewide Average % Total Accident Rate**	**1.32**

General Comments:

Traffic Analysis Comments

References used throughout the TCR:

Kern County General Plan, 1998
Kern County Regional Transportation Plan, 1998
Intelligent Transportation System Early Deployment Plan (Kern Region), 1997
State Transportation Improvement Plan (STIP), 1998, 2000
State Highway Operation Protection Plan (SHOPP), 1998, 2000, 2001
State Route 46 Project Study Report (KER 46 PM 0.0-32.8), 1993
Project Scope Summary Report (PSSR) (KER 46 PM 32.5-37.2), 1993
State Route 46 Corridor Study, June 2000

State Route 46
Segment Fact Sheet

Length (MI):	12.0	**Length (KM):**	19.3	**Segment:**	3 of 6	**KERN County**	**Rural or Urban:** RURAL
Begin PM:	20.5	**Begin KP:**	33.0	**SR 33 to Interstate 5**			
End PM:	32.5	**End KP:**	52.3				

Functional Classification: Principal Arterial

Route Designations:

Nat'l Hwy System (NHS)	YES	IRRS	HE,F	NO = Non IRRS; F = Yes, Focus; G = Yes, Gateway; HE = Yes, High Emphasis; HE,F = Yes, High Emphasis and Focus
Freeway Expressway Designation	YES	Nat'l Truck Network (NTN)	TA	NO = Non NTN; STAA = Yes, NTN STAA TRUCKS; TA = Yes, Terminal Access
Regionally Significant	YES			
Lifeline	NO	Scenic	NO	NO = Non Scenic; OD = Yes, Officially Designated; E = Yes, Eligible
STRAHNET	YES			

Transportation Concept

General Comments:

Existing Facility	2C	Existing LOS	B
Concept Facility	4E	Concept LOS	C
Ultimate Facility	4E	Existing/Ultimate Right - of - Way (ROW) in feet	100/215

Description - Rationale - General Comments

Segment 3 crosses flat terrain. At this location, it is presently 2 lane Conventional, with proposed improvements to 4 lane Expressway (215' ROW with 60' median; varied alignments). This area has oil exploration, with wells and storage/transfer facilities visible from the highway. Hazardous waste conditions exist in this area. Portions of this segment also contain endangered species. SR 46 passes through the community of Lost Hills, which has a historical school adjacent to the existing ROW. The California Aqueduct (PM 29.98) is also at this location, which will soon be designated a historic structure. An electrical substation lies east of SR 33, also adjacent to existing ROW. All of the aforementioned will affect ROW conditions for 4 lane improvement projects within this segment.

This segment is expected to operate at LOS A as a 20 year improved facility, with LOS C as the Concept LOS.

Programmed or Planned Projects

Programmed:

2000 STIP: SR 33 - SR 5 (KER 46-PM 20.5-32.5) 2 lane Conventional highway to 4 lane Expressway (also TCRP) (2011).

1998 SHOPP: Asphaltic/concrete (AC) overlay and widening complete in 2001.

Planned:

There are no projects planned for this segment.

Route Concept Deficiencies/Improvements

Widening to 4 lane Expressway will enhance the capacity of this segment. Operational/safety efficiency will be enhanced by deployment of Intelligent Transportation Systems (ITS) technology which may include, but not be limited to; weather and pavement condition sensors, changeable message signs, improved lane markers, and smart call boxes. These may be augmented by additional information systems such as kiosks, in traveler congregating areas.

Year Deficient: 2020

LOS with Improvement: A

State Route 46
Segment Fact Sheet

Land Use

This segment is comprised of an area of oil exploration, rangeland, and the small community of Lost Hills. Significant land use changes in the near future are not expected. Lost Hills has several historical structures and a small commercial area which will likely impact ROW conditions for any future widening projects.

Air Quality

For specific environmental information, contact the Caltrans District 6 Environmental office in Fresno at (559) 243-8234.

Air Quality District

San Joaquin Valley Unified Air Pollution Control District
1190 E. Gettysburg Ave., Fresno 93726 (559) 230-6000

Air Basin	Comments
San Joaquin Valley	Non-attainment area

Local Jurisdictions

RTPA/MPO

Kern County COG, 1401 19th St. Suite 200
Bakersfield, CA 93301 (661) 861-2191

Local and/or Regional LOS Standards:	General Plan and/or RTP Classification Standards:
Kern County, LOS D	Freeway

Transit Services/Modal Options

Orange Belt Stage Lines makes connections with Greyhound Bus Lines. Orange Belt travels SR 41 and stops at the junction of SR 41/46 for the connection. Kern Regional Transit has current plans to provide a Wasco/Lost Hills route.

Highway Log Right-of-Way Information

Average Median Width:	**0.0**	**Feet**	**0.00**	**Meters**
Average Shoulder Widths:	**8.0**	**Feet**	**2.44**	**Meters**
Average Lane Widths:	**12.0**	**Feet**	**3.66**	**Meters**

Right-of-Way (ROW) Comments (General):

There are no passing lanes in this segment. Development fronting SR 46, as well as cross streets, occurs in Lost Hills. The proposed 4 lane Expressway will narrow to 90' in Lost Hills due to historic features.

Traffic Forecasts

Year	AADT	Peak Hourly Volumes	LOS	V/C Ratio	Density
2000	5,100	561	B	0.26	N/A
2010	7,528	828	C	0.38	N/A
2020	10,419	1,146	D	0.52	N/A

Calculation Factors

% Traffic growth per year (0-20 yrs):	**3.3**	**% Trucks:**	**40.0**
Directional Split:	**67/33**	**% Buses + RVs:**	**5.0**
Terrain:	**LEVEL**		

TASAS Accident Data -
Rates are per million vehicle miles from 1/1/96 through 12/31/98

Actual % Fatal + Injury Accident Rate	**0.45**	**Actual % Total Accident Rate**	**1.27**
Statewide Average % Fatal + Injury Accident Rate	**0.64**	**Statewide Average % Total Accident Rate**	**1.34**

General Comments:

Traffic Analysis Comments

References used throughout the TCR:

Kern County General Plan, 1998
Kern County Regional Transportation Plan, 1998
Intelligent Transportation System Early Deployment Plan (Kern Region), 1997
State Transportation Improvement Plan (STIP), 1998, 2000
State Highway Operation Protection Plan (SHOPP), 1998, 2000, 2001
State Route 46 Project Study Report (KER 46 PM 0.0-32.8), 1993
Project Scope Summary Report (PSSR) (KER 46 PM 32.5-37.2), 1993
State Route 46 Corridor Study, June 2000

State Route 46
Segment Fact Sheet

Length (MI):	13.5	**Length (KM):**	21.7	**Segment:**	4 of 6	**KERN County**	**Rural or Urban:** RURAL
Begin PM:	32.5	**Begin KP:**	52.3	**Interstate 5 to one mile west of Scofield Ave.**			
End PM:	46.0	**End KP:**	74.0				

Functional Classification: Minor Arterial

Route Designations:

Nat'l Hwy System (NHS)	YES	IRRS	NO	NO = Non IRRS; F = Yes, Focus; G = Yes, Gateway; HE = Yes, High Emphasis; HE,F = Yes, High Emphasis and Focus
Freeway Expressway Designation	YES	Nat'l Truck Network (NTN)	TA	NO = Non NTN; STAA = Yes, NTN STAA TRUCKS; TA = Yes, Terminal Access
Regionally Significant	YES			
Lifeline	NO	Scenic	NO	NO = Non Scenic; OD = Yes, Officially Designated; E = Yes, Eligible
STRAHNET	YES			

Transportation Concept

General Comments:

Existing Facility	2C	Existing LOS	C
Concept Facility	4E	Concept LOS	C
Ultimate Facility	4E	Existing/Ultimate Right - of - Way (ROW) in feet	60/215

Description - Rationale - General Comments

Segment 4 crosses flat terrain. It is presently 2 lane Conventional, with proposed improvement to 4 lane Expressway (215' ROW with 60' median; varied alignments). This segment crosses three canals (PM 32.8) where riparian vegetation exists. Endangered species inhabit the area.

Segment 4 is expected to operate at LOS A as a 20 year improved facility, with LOS C as the Concept LOS.

Programmed or Planned Projects

Programmed:

2000 SHOPP (Long-Lead): Asphaltic/concrete (AC) overlay and widening (2007).

Planned:

RTP: 2 lane Conventional highway to 4 lane Expressway (2018).

Route Concept Deficiencies/Improvements

Widening to a 4 lane Expressway will enhance the capacity of this segment. Operational/safety efficiency will be enhanced by deployment of Intelligent Transportation Systems (ITS) technology which may include, but not be limited to; weather and pavement condition sensors, changeable message signs, improved lane markers, and smart call boxes.

Year Deficient: 2010

LOS with Improvement: A

State Route 46
Segment Fact Sheet

Land Use

This segment crosses open range, low-density residential development (mainly in the vicinity of Wasco), and areas of oil exploration. Significant development or land use change is not expected in the future. Since the population growth rate in the Bakersfield/Wasco area averages 3% a year, gradual development encroachment to the area west of Wasco may occur. An electrical substation is located near Wasco, adjacent to SR 46. The highway also crosses three canals.

Air Quality

For specific environmental information, contact the Caltrans District 6 Environmental office in Fresno at (559) 243-8234.

Air Quality District

San Joaquin Valley Unified Air Pollution Control District
1190 E. Gettysburg Ave., Fresno 93726 (559) 230-6000

Air Basin	Comments
San Joaquin Valley	Non-attainment area

Local Jurisdictions

RTPA/MPO

Kern County COG, 1401 19th St. Suite 200
Bakersfield, CA 93301 (661) 861-2191

Local and/or Regional LOS Standards:	General Plan and/or RTP Classification Standards:
Kern County, LOS D	Freeway

Transit Services/Modal Options

Orange Belt Stage Lines connects with Greyhound Bus LIne to provide service between the coast and Wasco/Bakersfield. Kern Regional Transit provides service from Delano to Famoso on SR 99. It connects to SR 46 and serves this area with a route to Wasco. Kern Regional Transit also has current plans to start a Wasco/Lost Hills route on SR 46.

Highway Log Right-of-Way Information

Average Median Width:	**0.0**	**Feet**	**0.00**	**Meters**
Average Shoulder Widths:	**6.0**	**Feet**	**1.83**	**Meters**
Average Lane Widths:	**12.0**	**Feet**	**3.66**	**Meters**

Right-of-Way (ROW) Comments (General):

There are no passing lanes in this segment. Conditions consistent with previous segments, but with less cross-traffic or turning movements.

Traffic Forecasts

Year	AADT	Peak Hourly Volumes	LOS	V/C Ratio	Density
2000	5,000	650	C	0.30	N/A
2010	8,005	1,041	D	0.47	N/A
2020	11,850	1,541	E	0.68	N/A

Calculation Factors

% Traffic growth per year (0-20 yrs):	**4.00**	**% Trucks:**	**40.0**
Directional Split:	**64/36**	**% Buses + RVs:**	**5.0**
Terrain:	**LEVEL**		

TASAS Accident Data -

Rates are per million vehicle miles from 1/1/96 through 12/31/98

Actual % Fatal + Injury Accident Rate	**0.26**	**Actual % Total Accident Rate**	**0.63**
Statewide Average % Fatal + Injury Accident Rate	**0.47**	**Statewide Average % Total Accident Rate**	**0.97**

General Comments:

Traffic Analysis Comments

References used throughout the TCR:

Kern County General Plan, 1998
Kern County Regional Transportation Plan, 1998
Intelligent Transportation System Early Deployment Plan (Kern Region), 1997
State Transportation Improvement Plan (STIP), 1998, 2000
State Highway Operation Protection Plan (SHOPP), 1998, 2000, 2001
State Route 46 Project Study Report (KER 46 PM 0.0-32.8), 1993
Project Scope Summary Report (PSSR) (KER 46 PM 32.5-37.2), 1993
State Route 46 Corridor Study, June 2000

State Route 46
Segment Fact Sheet

Length (MI):	5.2	**Length (KM):**	8.4	**Segment:**	5 of 6	KERN County	**Rural or Urban:** URBAN
Begin PM:	46.0	**Begin KP:**	74.0				
End PM:	51.2	**End KP:**	82.4	One mile west of Scofield Ave. to SR 43 - North Junction			

Functional Classification: P1M (Extension of rural MA into urban area)

Route Designations:

Nat'l Hwy System (NHS)	YES	IRRS	NO	NO = Non IRRS; F = Yes, Focus; G = Yes, Gateway; HE = Yes, High Emphasis; HE,F = Yes, High Emphasis and Focus
Freeway Expressway Designation	YES	Nat'l Truck Network (NTN)	TA	NO = Non NTN; STAA = Yes, NTN STAA TRUCKS; TA = Yes, Terminal Access
Regionally Significant	NO			
Lifeline	NO	Scenic	NO	NO = Non Scenic; OD = Yes, Officially Designated; E = Yes, Eligible
STRAHNET	YES			

Transportation Concept

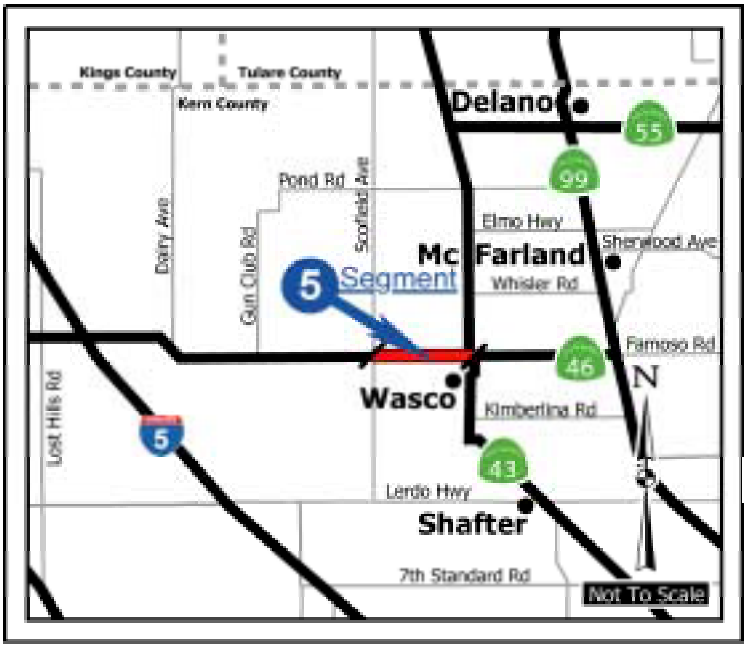
General Comments:

Existing Facility	2C	Existing LOS	B
Concept Facility	4C	Concept LOS	D
Ultimate Facility	4E	Existing/Ultimate Right - of - Way (ROW) in feet	100/215

Description - Rationale - General Comments

Segment 5 crosses flat terrain with riparian features, passing through the City of Wasco. It is presently 2 lane Conventional, with proposed improvement to 4 lane Conventional (100' ROW, no median). This configuration would be feasible, given Wasco's restricted ROW as a built-out area. The other factor limiting ROW is that SR 46 serves as a Burlington Northern Railroad underpass and is presently 2 lanes. Alternate alignment could allow a 4 lane Expressway, with 215' ROW.

This segment is expected to operate at LOS B as a 20 year improved facility, with LOS D as the Concept LOS.



Programmed or Planned Projects

Programmed:

1998 STIP: Wasco; Scofield Ave. - SR 43 grade separation (KER 46-PM 47.0-51.3). Environmental study for signalization, intersection improvements and widening to 4 lanes (2011).

Planned:

There are no projects planned for this segment.

Route Concept Deficiencies/Improvements

Due to the present 2 lane configuration and restrictive right-of-way (businesses/sidewalks built-out to street and underpass function of SR 46), alternate alignments will be considered. The Concept LOS (20 years) is for a 4 lane Conventional highway within existing ROW. The Ultimate Facility is for a 4 lane Expressway bypass around Wasco. Intelligent Transportation System (ITS) technology for this segment may include, but not be limited to; interactive and commuter kiosks, community access television, weather and pavement condition sensors, smart call boxes, and improved lane markers.

Year Deficient: 2020

LOS with Improvement: B

State Route 46
Segment Fact Sheet

Land Use

Wasco is a developed urban area, with a mix of commercial and residential land uses. The area can be expected to grow at an average of 3% annually, coinciding with Bakersfield's population growth. Wasco serves as a transportation/warehousing site for rail and trucking. There is a considerable amount of tourist traffic from Bakersfield to the coast through Wasco, particularly during peak summer and winter months.

Air Quality

For specific environmental information, contact the Caltrans District 6 Environmental office in Fresno at (559) 243-8234.

Air Quality District

San Joaquin Valley Unified Air Pollution Control District
1190 E. Gettysburg Ave., Fresno 93726 (559) 230-6000

Air Basin	Comments
San Joaquin Valley	Non-attainment area

Local Jurisdictions

RTPA/MPO

Kern County COG, 1401 19th St. Suite 200
Bakersfield, CA 93301 (661) 861-2191

Local and/or Regional LOS Standards:	General Plan and/or RTP Classification Standards:
Kern County, LOS D	Freeway

Transit Services/Modal Options

Orange Belt Stage Lines makes connections with Greyhound (via SR 41/46 junction) to provide service between the coast and the Wasco/Bakersfield area. Kern Regional Transit provides service between Wasco/Famoso/ Delano via a SR 99/46 route. Kern Regional Transit also has current plans to provide a Wasco/Lost Hills route. Amtrak coaches operate from Wasco, providing service to rail connections in Bakersfield.

Highway Log Right-of-Way Information

Average Median Width:	**0.0**	**Feet**	**0.00**	**Meters**
Average Shoulder Widths:	**8.0**	**Feet**	**2.44**	**Meters**
Average Lane Widths:	**12.0**	**Feet**	**3.66**	**Meters**

Right-of-Way (ROW) Comments (General):

There are no passing lanes in this segment. Wasco has numerous developments and businesses fronting SR 46 which will likely impede future widening.

Traffic Forecasts

Year	AADT	Peak Hourly Volumes	LOS	V/C Ratio	Density
2000	6,500	585	B	0.00	N/A
2010	9,484	854	D	0.00	N/A
2020	13,000	1,170	E	0.00	N/A

Calculation Factors

% Traffic growth per year (0-20 yrs):	**3.2**	**% Trucks:**	**40.0**
Directional Split:	**64/36**	**% Buses + RVs:**	**5.0**
Terrain:	**LEVEL**		

TASAS Accident Data -

Rates are per million vehicle miles from 1/1/96 through 12/31/98

Actual % Fatal + Injury Accident Rate	**0.38**	**Actual % Total Accident Rate**	**0.96**
Statewide Average % Fatal + Injury Accident Rate	**0.70**	**Statewide Average % Total Accident Rate**	**1.59**

General Comments:

Traffic Analysis Comments

References used throughout the TCR:

Kern County General Plan, 1998
Kern County Regional Transportation Plan, 1998
Intelligent Transportation System Early Deployment Plan (Kern Region), 1997
State Transportation Improvement Plan (STIP), 1998, 2000
State Highway Operation Protection Plan (SHOPP), 1998, 2000, 2001
State Route 46 Project Study Report (KER 46 PM 0.0-32.8), 1993
Project Scope Summary Report (PSSR) (KER 46 PM 32.5-37.2), 1993
State Route 46 Corridor Study, June 2000

State Route 46
Segment Fact Sheet

Length (MI):	6.6	**Length (KM):**	10.6	**Segment:**	6 of 6	KERN County	**Rural or Urban:** RURAL
Begin PM:	51.2	**Begin KP:**	82.4	SR 43 - North Junction to SR 99			
End PM:	57.8	**End KP:**	93.0				

Functional Classification: Minor Arterial

Route Designations:

Nat'l Hwy System (NHS)	YES	IRRS	NO	NO = Non IRRS; F = Yes, Focus; G = Yes, Gateway; HE = Yes, High Emphasis; HE,F = Yes, High Emphasis and Focus
Freeway Expressway Designation	YES	Nat'l Truck Network (NTN)	TA	NO = Non NTN; STAA = Yes, NTN STAA TRUCKS; TA = Yes, Terminal Access
Regionally Significant	YES			
Lifeline	NO	Scenic	NO	NO = Non Scenic; OD = Yes, Officially Designated; E = Yes, Eligible
STRAHNET	YES			

Transportation Concept

General Comments:

Existing Facility	2C	Existing LOS	B
Concept Facility	4E	Concept LOS	C
Ultimate Facility	4E	Existing/Ultimate Right - of - Way (ROW) in feet	80/215

Description - Rationale - General Comments

Segment 6 crosses flat terrain. It is presently 2 lane Conventional with proposed improvement to 4 lane Expressway (215' ROW with 60' median). This segment is bordered by agricultural land, with traveler-oriented businesses at SR 99 in the small community of Famoso. Endangered species inhabit the area. Environmental and agricultural factors could impact ROW acquisition for 4 lane improvements.

This segment is expected to operate at LOS A as a 20 year improved facility, with LOS C as the Concept LOS.

Programmed or Planned Projects

Programmed:

There are no projects programmed for this segment.

Planned:

RTP: 4 lane Expressway on new alignment (2018).

Route Concept Deficiencies/Improvements

Widening to a 4 lane Expressway will enhance the capacity of this segment. Operational/safety efficiency will be enhanced by deployment of Intelligent Transportation Systems (ITS) technology which may include, but not be limited to; weather and pavement condition sensors, changeable message signs, improved lane markers, and smart call boxes.

Year Deficient: 2020

LOS with Improvement: A

State Route 46
Segment Fact Sheet

Land Use

The area through which this segment passes is primarily agricultural. The small community of Famoso (PM 57.6) serves travelers' needs at SR 46/99 with restaurants, service stations, and other commercial businesses. Future development in this area may be dependent on overall travel increases for both SR 46 and SR 99.

Air Quality

For specific environmental information, contact the Caltrans District 6 Environmental office in Fresno at (559) 243-8234.

Air Quality District

San Joaquin Valley Unified Air Pollution Control District
1190 E. Gettysburg Ave., Fresno 93726 (559) 230-6000

Air Basin	Comments
San Joaquin Valley	Non-attainment area

Local Jurisdictions

RTPA/MPO

Kern County COG, 1401 19th St. Suite 200
Bakersfield, CA 93301 (661) 861-2191

Local and/or Regional LOS Standards:	General Plan and/or RTP Classification Standards:
Kern County, LOS D	Freeway

Transit Services/Modal Options

Orange Belt Stage Lines provides service between the coast and the Wasco/ Bakersfield area, with a connection at the SR 41/46 junction. Kern Regional Transit connects Famoso/Delano-Wasco via SR 99/46.

Highway Log Right-of-Way Information

Average Median Width:	**0.0**	**Feet**	**0.00**	**Meters**
Average Shoulder Widths:	**8.0**	**Feet**	**2.44**	**Meters**
Average Lane Widths:	**12.0**	**Feet**	**3.66**	**Meters**

Right-of-Way (ROW) Comments (General):

There are no passing lanes in this segment. SR 46 splits and transitions to SR 99 at Famoso.

Traffic Forecasts

Year	AADT	Peak Hourly Volumes	LOS	V/C Ratio	Density
2000	5,500	550	B	0.23	N/A
2010	8,025	802	C	0.36	N/A
2020	11,000	1,100	D	0.49	N/A

Calculation Factors

% Traffic growth per year (0-20 yrs):	**3.2**	**% Trucks:**	**40.0**
Directional Split:	**60/40**	**% Buses + RVs:**	**5.0**
Terrain:	**LEVEL**		

TASAS Accident Data -
Rates are per million vehicle miles from 1/1/96 through 12/31/98

Actual % Fatal + Injury Accident Rate	**0.44**	**Actual % Total Accident Rate**	**0.78**
Statewide Average % Fatal + Injury Accident Rate	**0.49**	**Statewide Average % Total Accident Rate**	**1.01**

General Comments:

Traffic Analysis Comments

References used throughout the TCR:

Kern County General Plan, 1998
Kern County Regional Transportation Plan, 1998
Intelligent Transportation System Early Deployment Plan (Kern Region), 1997
State Transportation Improvement Plan (STIP), 1998, 2000
State Highway Operation Protection Plan (SHOPP), 1998, 2000, 2001
State Route 46 Project Study Report (KER 46 PM 0.0-32.8), 1993
Project Scope Summary Report (PSSR) (KER 46 PM 32.5-37.2), 1993
State Route 46 Corridor Study, June 2000

Glossary

AADT: (Average Annual Daily Traffic) This designation indicates that the daily traffic is averaged over one calendar year.

CMS: (Changeable Message Sign) A CMS is a full-matrix display sign used on State highways to provide motorists with an advanced warning of major highway incidents and route diversion information. CMSs are capable of displaying a variety of character heights and up to three lines of text. CMSs play increasingly important roles on State highways by improving operations and safety.

Classification of Roads:

- **Conventional (C):** A highway without access control, which may or may not be divided. Grade separations at intersections or access control may be used when justified at spot locations. Example: 2C = 2 lane Conventional Highway.
- **Expressway (E):** An arterial highway with at least partial control of access, which may or may not be divided or have grade separations at intersections. Example: 4E = 4 lane Expressway (note: 2 lane Expressways are not common).
- **Freeway (F):** A divided highway with access restricted to interchanges and with grade separation at all intersections. Example: 6F = 6 lane Freeway.
- **Functional Classification:** Guided by Federal legislation, functional classification refers to a process by which streets and highways are grouped into classes or systems, according to the character of the service that is provided, e.g., Principal Arterial, Minor Arterial, Collector, Local, etc.

COG: See RTPA

Density: The number of vehicles occupying a given length of lane or roadway averaged over time, usually expressed as vehicles per mile or vehicles per mile per lane. Also see V/C.

Facility:

- **Concept Facility:** A highway facility type and characteristic considered viable without improvement within the 20 year planning period given financial, environmental, planning and engineering factors.
- **Present Facility:** Highway type and general characteristics at the time of the development of the TCR.

FTIP: See Project Programming

ITMS: (Intermodal Transportation Management System) A performance-based decision support system operating on a personal computer which allows alternatives analysis using performance measures. It has intermodal system elements for freight and person movements using a spatial and attribute database associating transportation systems under existing and forecasted conditions. It provides a new intermodal planning tool with a common Statewide data set for transportation planners.

ITS: (Intelligent Transportation Systems) ITS refers to a wide variety of tools and techniques that focus on addressing transportation problems by improving the efficiency and safety of the existing transportation infrastructure through the application of communications, computing, information, and other “high technologies.”

ITSP: (Interregional Transportation Strategic Plan) The ITSP is a document prepared by Caltrans to consolidate and communicate key elements of its ongoing long and short range planning. The ITSP serves as a counterpart to the Regional Transportation Plans (RTPs) prepared by the 43 Regional Transportation Planning Agencies (RTPAs) in California.

KP: (Kilo Post) See Post Mile

Lifeline Routes: See Route Designations

LOS: (Level of Service) A general term that describes the operating conditions a driver will experience while driving in a particular facility. LOS is determined by the vehicle delay and **volume/capacity** (v/c) ratio and expressed by a series of letter grades from A, (low **v/c** ratio and delay, no impediments) through E (high **v/c** ratio and delay, considerable impediments to traffic flow), and F (extremely high **v/c** ratio and delay, gridlock conditions).

MIS: (Major Investment Study) When the need for a major metropolitan transportation investment is identified and Federal funds are potentially involved, major investment (corridor or sub-area) studies are undertaken to develop or refine the plan and lead to decisions by the Metropolitan Planning Organization (MPO), in cooperation with participating agencies, on the design concept and scope of the investment.

MPO: See RTPA

Multi-Modal: Pertaining to more than one mode of travel such as bicycle, private vehicle, bus, light rail, etc.

NHS: See Route Designation

NTN: See Route Designation

Non-attainment (pertaining to air quality): Identifies non-attainment status for CO (carbon monoxide), Ozone, and PM (particulate matter) within the subject air basin.

PM: (Mile Post Marker, Postmile) or KP (Kilo Post) An 8" x 48" metal post marker along a State highway indicating a location using the postmile or designation. This is the distance in miles (or kilometers, in the case of Kilo Post measurements), that the given location is from the county line measuring from the south to the north or from the west to the east. Postmiles ascend in the northerly and easterly directions as determined by the route. South-north routes usually have an odd number and west-east routes usually have an even number. The PM also includes an abbreviation for the County (i.e., in Caltrans District 6: FRE = Fresno, KER = Kern, KIN = Kings, TUL = Tulare, MAD = Madera).

PSR: (Project Study Report) A pre-programming document required for project inclusion in the STIP.

PROJECT PROGRAMMING: Separate programming documents prepared and adopted for somewhat different purposes, are required under State and Federal law. Transportation programming is the public decision making process which sets priorities and funds projects envisioned in long range transportation plans. It commits expected revenues over a multi-year period to transportation projects. Programming schedules high priority capital outlay projects for development and implementation. Programming documents include Federal Improvement Plans, State, Regional and Metropolitan Transportation Plans, e.g., FTIP, ITIP, RTIP, SHOPP, STIP, etc.

- **FTIP:** (Federal Transportation Improvement Program) A Federal statute requires MPOs to complete a Transportation Improvement Program. The MPO prepares the FTIP in cooperation with its member agencies and transit operators, State and Federal agencies, and with public involvement. The FTIP must by law be financially constrained and include a financial plan that demonstrates how projects can be implemented while the existing transportation system is being adequately operated and maintained. The FTIPs also include Federally funded capital improvements to the regions' transit systems along with associated Federal operating assistance program and Federal Statewide Transportation Improvement Program (FSTIP).

- **ITIP:** (Interregional Transportation Improvement Program) The ITIP is Caltrans' equivalent to the RTIP (Regional Transportation Improvement Program) and consists of STIP projects funded from the Interregional Program share, which is 25% of new STIP funding. Caltrans' ITIP may nominate projects to the STIP only for the Interregional Program. The ITIP should be based on a Strategic Plan for implementing the Interregional Program. The ITIP should describe how proposed projects relate to the Strategic Plan and how the Strategic Plan would implement the California Transportation Commission's objectives. The ITIP includes both State highway and rail projects (potentially including mass transit guideway and grade separation projects).

- **RTIP:** (Regional Transportation Improvement Program) After consulting with Caltrans, each Regional Transportation Planning Agency (RTPA) and/or County Transportation Commission (CTC) must prepare and submit an RTIP for regions with urbanized areas. Some urbanized RTPAs coincide with the Federal Metropolitan Planning Organizations (MPOs). Each regional agency is required to adopt and submit its RTIP to the CTC and to Caltrans. The CTC will utilize the RTIP to consider projects to be included in the State Transportation Improvement Program (STIP). The funds are available for a broad array of transportation improvement projects, including improving State highways, local roads, public transit, inter-city rail, pedestrian and bicycle facilities, grade separations, transportation system management, transportation demand management, soundwalls, etc.

- **SHOPP:** (State Highway Operation Protection Program) The SHOPP is a four year program limited to projects related to State highway safety and rehabilitation. SHOPP funds are for major transportation capital improvements that are necessary to preserve and protect the State highway system. The SHOPP does not include projects to add through lanes to increase capacity. Most of the projects are for pavement rehabilitation, bridge rehabilitation, and traffic safety improvements. Other projects may include such things as operational improvements (e.g., traffic signalization) and roadside rest areas.

- **STIP:** (State Transportation Improvement Program) Under California law, the STIP and SHOPP (State Highway Operations Protection Program) are the two primary documents through which the CTC commits and allocates funds to particular projects. In the year 2000 and thereafter, the STIP will be a four year plan with updates every two years. The STIP is a capital improvement program of transportation projects funded with revenues from the State Highway Account and other sources on and off the State highway system. The STIP includes a list of transportation projects, proposed in two broad programs, the regional program funded with 75% of new STIP funding and the interregional program funded from 25%. The STIP has two main funding components: the RIP (Regional Improvement Program), prepared by RTPAs and the IIP (Interregional Improvement Program) prepared by Caltrans.

ROW: (Right-of-Way) Denotes the *total* width allocated for a highway, including shoulders and adjacent land.

RCR: See TCR

Route Designations: Identifies whether or not the subject segment of a route is designated as being part of a system including; Freeway/Expressway System, Highways of Regional Significance, Interregional Highway System (IRRS), National Highway System (NHS), National Truck Network (NTN), Terminal Access Route for the National Truck Network, Scenic Highway, or Strategic Highway Network (STRAHNET).

- **Freeway/Expressway System:** A freeway, as defined by statute, is a highway in respect to which the owners of abutting lands have no right or easement of access to or from their abutting lands or in respect to which such owners have only limited or restricted right or easement of access. This statutory definition also includes expressways.

- **IRRS:** (Interregional Road System) Caltrans developed an Interregional Road System Plan that identified projects which will provide the most adequate interregional road system to all economic centers in the State. IRRS is a series of Interregional State highway routes, outside the urbanized areas, that provide access to, and links between, the State's economic centers, major recreational areas, and urban and rural regions. Due to the high number of routes and capacity improvements needed on the IRRS, the most critical IRRS routes were identified as *High Emphasis Routes*. High Emphasis Routes are a priority for programming and construction and are critically important to interregional travel and the State as a whole. *Focus Routes* are a subset of the High Emphasis Routes. These routes represent 10 IRRS corridors that should be of the highest priority for completion to minimum facility standard in the 20 year period.

- **Lifeline Routes:** (Earthquake Emergency Response) A Lifeline Route is a route on the State highway system that is deemed so critical to emergency response/life-saving activities of a region or the state that it must remain open immediately following a major earthquake, or for which pre-planning for detour and/or expeditious repair and reopening can guarantee through-movement. The focus is on highly critical routes that allow for the immediate movement of emergency equipment and supplies into a region or through a region.

- **NHS:** (National Highway System) The purpose of the NHS is to provide an interconnected system of principal arterial routes which will serve major population centers, international border crossings, ports, airports, public transportation facilities and other intermodal transportation facilities and other major travel destinations; meet National defense requirements and serve interstate and interregional travel. The NHS consists of 155,000 miles, (plus or minus 15 percent), of the major roads in the U.S. Included in the NHS is all interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors.

- **NTN:** (National Truck Network) A list of truck route segments and their truck access designations (such as National Network, Terminal Access, California Legal, Advisory, or Restricted) with each segment's beginning and ending post miles, and beginning and ending cross streets.

- **Regionally Significant:** A transportation corridor that serves regional transportation needs and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities.

- **Scenic Highway:** A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic

highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code. For a highway to be considered *Officially Designated* the local jurisdiction is required to develop and adopt protection measures in the form of ordinances to apply to the area of land within the scenic corridor. Such regulations may already exist in various portions of local codes. The application for nominating *Eligible* scenic highways to become Officially Designated requires the preparation of a visual assessment and a resolution package. The resolution package is to include a resolution of intent, two maps, a video, and a narrative description of the scenic elements in the corridor, including intrusions on scenic views. Additions and deletions to the list of highways eligible for scenic designation can only be made through legislative action.

- **STAA Truck:** In 1982, the Federal government passed the Surface Transportation Assistance Act (STAA). This act requires states to allow certain longer trucks on a network of Federal highways, referred to as the National Network (NN). A STAA truck is, in many cases, longer than a "California legal" truck, and may operate only on specific highways in California.

- **STRAHNET:** (Strategic Highway Corridor Network) STRAHNET is a National system of public highways that is a key deterrent in U.S. strategic policy. It provides defense access, continuity, and emergency capabilities for movements of personnel and equipment in both peace and war. It is about 61,000 miles, including the 45,400-mile system of Interstate and Defense Highways and 15,600 miles of other important public highways. STRAHNET connectors (about 1,700 miles) are additional highway routes linking over 200 important military installations and ports to the STRAHNET. These routes are typically used when moving personnel and equipment during a mobilization or deployment. Generally, these routes end at the port boundary or installation gate.

- **Terminal Access Route:** Terminal Access (TA) routes are portions of State or local highways that Caltrans or a local government granted access to STAA trucks. The purpose of TA routes is to allow STAA trucks to (1) travel between NN routes, (2) reach a truck's operating facility, or (3) reach a facility where freight originates, terminates, or is handled in the transportation process.

RTIP: See Project Programming

RTP: (Regional Transportation Plan) The RTP is a comprehensive 20 year plan for the region, updated every two years by the regional transportation planning agency. The RTP includes goals, objectives, and policies and recommends specific transportation improvements.

RTPA: (Regional Transportation Planning Agency) The RTPA is an association of city and county governments created to address regional transportation issues while protecting the integrity and autonomy of each jurisdiction. The RTPA serves as the forum for cooperative decision making by principal elected officials of general local government and is responsible for the preparation and adoption of a Regional Transportation Improvement Program (RTIP). There are 43 RTPAs in California. In smaller counties, usually the County Transportation Commission; in urban counties, usually the Metropolitan Planning Organization (MPO) is the RTPA. RTPAs produce the RTIPs for the approval of the California Transportation Commission (CTC).

- **MPOs and COGs:** RTPAs can be an MPO (Metropolitan Planning Organization) or a COG (Council of Governments) or all three. Some COGs also serve as MPOs, under Federal transportation rules, and this designation carries considerable power in allocating Federal and State funds for transportation projects. For example, Fresno COG is the MPO for Fresno County.

According to U.S. Code, an MPO is the organization designated by the governor and local elected officials as responsible, together with the State, for preparing a comprehensive transportation plan for both highway and transit modes, with long range (10 – 20 years) and shorter range (five year) elements in an urbanized area (population 250,000 or greater). The major role of the COG is to foster inter-governmental communications and cooperation, undertake comprehensive regional planning with an emphasis on transportation, provide for citizen involvement in the planning process and provide technical services to the member agencies. COGs are created by elected officials of counties and their incorporated cities as a means of providing a cooperative body for the discussion and resolution of issues that go beyond their individual boundaries.

State and Federal laws encourage such efforts. In each of these areas, COGs act as a consensus-builder to develop an acceptable approach on how to handle problems which do not recognize jurisdictional boundaries.

R/U: (Rural *or* Urban location) Areas designated as rural are those lying outside the U.S. Census urban area boundary with a population less than 2,500 (less than 5,000 population for Federal Aid highway purposes). Areas designated as urban are those lying inside the U.S. Census urbanized boundary.

Scenic Highway: See Route Designation

SHOPP: See Project Programming

SR: (State Route) Highways within the State which are distinctively designed to serve intrastate and interstate travel.

STAA: See Route Designation

STIP: See Project Programming

STRAHNET: See Route Designation

TCR: (Transportation Concept Report) Formerly called a Route Concept Report or RCR, this document analyzes a transportation corridor service area, establishes a 20 year transportation planning concept, and identifies modal transportation options and applications needed to achieve the 20 year concepts.

TCRP: (Traffic Congestion Relief Program) The TCRP was enacted as part of AB 2928 (2000). Through the TCRP, the Governor and Legislature allocated $4.9 billion for projects to relieve congestion, provide safe and efficient movement of goods, intermodal connectivity, completely fund some projects and make investments in transit and rail within the State.

Undercrosssing: (U/C) A configuration where a State highway crosses perpendicular to and above the grade of a local road.

Underpass: A configuration where the State highway crosses perpendicular to and below the grade of a railroad line**.**

UTC: (Ultimate Transportation Corridor) Highest predictable build-out beyond 20 years.

V/C: (Volume/Capacity ratio) A ratio of demand flow rate to capacity for a traffic facility. Also see Density.